

**QUALITY CERTIFICATE**
**Number:** 62939  
**Invoice:** E401481  
**Date:** 15/06/2004  
**ACESITA Order:** 9599119

**Customer:**  
 DUFERCO S.A.  
 VIA BAGUTTI 9  
 CH-6900 - LUGANO  
 P.O.NR.: ORDEM 2

Part Number: ASTM A 36/A 36M

**Steel grade:** ACE P016N      **Finish:** HOT ROLLED      **Product:** COIL

**Dimensions:** 9,52 mm x 1220 mm

**Marks:**
**Chemical composition**

Heat nr.	C %	Mn %	Si %	P %	S %	Cr %	Ni %	Mo %	Al %							DI mm
402646D	0,149	0,76	0,060	0,020	0,004	0,06	0,02	0,006	0,0481							13,49
402647B	0,157	0,72	0,060	0,020	0,001	0,11	0,03	0,008	0,0564							14,70

**Results**

Test/Variable	Unit	402646D02		402647B02		402647B03		402647B04		402647B09			
		H	T	H	T	H	T	H	T	H	T	H	T
		Tensile Strength	MPA		469,00		498,00		498,00		498,00		498,00
Yield Strength 0.2 %	MPA		317,00		357,00		357,00		357,00		357,00		
Elongation 2"	%		34,00		30,00		30,00		30,00		30,00		
Grain Size			07/07		08/08		08/08		08/08		08/08		
Hardness	HRB	078	078	079	079	079	079	079	079	079	079		
Structure		FERRITE-PEARLITE		FERRITE-PEARLITE		FERRITE-PEARLITE		FERRITE-PEARLITE		FERRITE-PEARLITE			
Crown	mm	0,006		0,035		0,034		0,031		-0,03			
Wedge	mm	0,028		-0,003		0,016		0,017		-0,067			
Std. Deviation	mm	0,02		0,02		0,03				0,51			
Width	mm	1235,10		1232,70		1234,50		1235,80		1236,30			
Net Weight	MT	19,050		18,730		19,690		19,670		19,680			
Gross Weight	MT	19,050		18,730		19,690		19,670		19,680			

**Heat & Lot identification:**

Ok

**Surface quality / dimensions:**

Ok

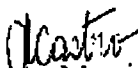
**Remarks:** ASTM A 36/A 36M.

Free from mercury contamination.

Certify that the results above are correct and in acc. with the specifications or accepted concession.

Quality management system certified ABS QE no. 30071 acc to AD2000 W2/W10; ISO 9001:2000.

Environmental management system certified ABS QE no. 65989 acc to ISO 14001.

  
 Geovane Martins Castro  
 Qualified Inspector  
 ACESITA S.A.